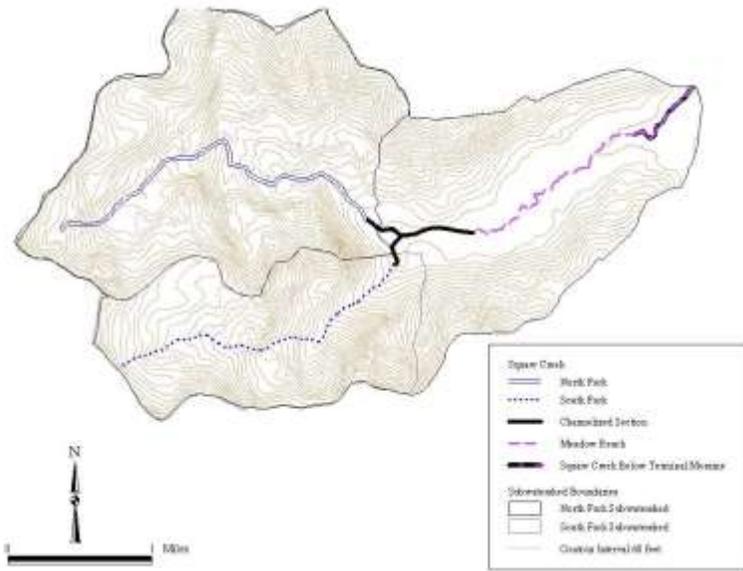


Waterbody:
Squaw Creek

TMDL: **Sediment**

Updated:
Jane_Covey
10/16/2015

Map



Background Information:

- *Date of approval: April 2006 (Lahontan Region); July 27, 2007, (USEPA)*
- *Basis for TMDL: Bio assessment studies conducted in 2000 and 2001 by researchers from UC Santa Barbara Sierra Nevada Aquatic Research Center demonstrated degraded benthic aquatic invertebrate communities and physical channel conditions in Squaw Creek. Accelerated hill slope erosion from land disturbance related to development, stream channel erosion, road sanding operations, and naturally occurring erosion contribute to sediment loading to the creek.*
- *Project Implementers: Squaw Valley Ski Corporation, Resort at Squaw Creek, Village at Squaw Valley, and Placer County.*
- *Target: The TMDL will be met when the rolling average for three consecutive 3-event datasets meets or exceeds the biologic condition numeric target of 25.*
- *Attainment of TMDL: Estimated time Frame for meeting the numeric target and achieving the TMDL is 20 years*

Figure of current data from

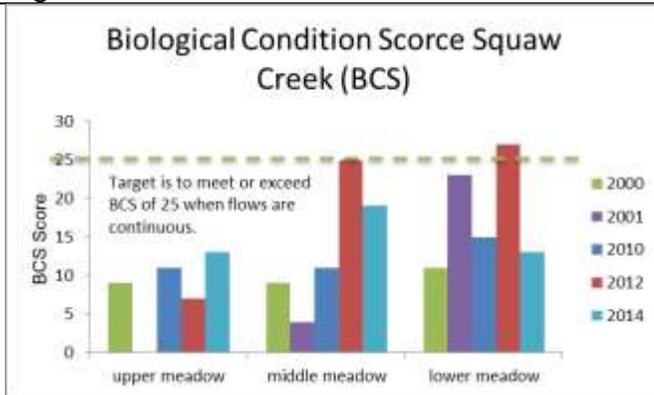


Figure 1

Permits that include TMDL implementation measures:

- Amended MRP No. 93-25-A2 for Squaw Valley Ski Area
- Amended MRP No. 2003-0002A1 for Village at Squaw Valley
- Small MS4 permit 2013-0001-DWQ for Placer County
- Updated WDR MRP No. R6T-2009-0024

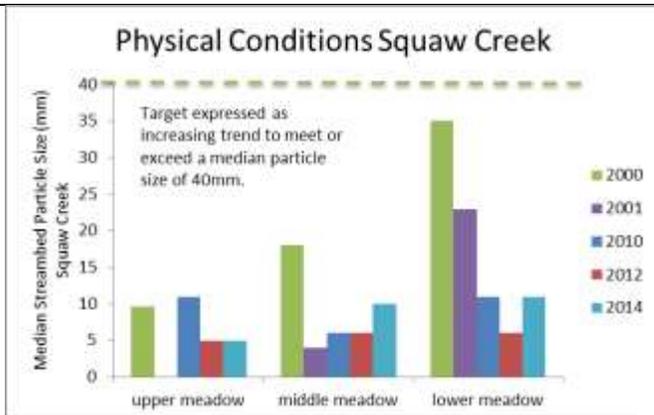


Figure 2

Period of evaluation: 2012-2014

Monitoring for TMDL parameters: Rapid Assessment Methodologies (RAM) and bioassessment data have been collected bi-annually since 2012. Monitoring for Squaw Creek sediment TMDL parameters are planned to occur every even year thereafter, following the specific bioassessment protocols.

¹ Squaw Creek Sediment TMDL numeric targets use three established sampling sites (upper, middle, and lower) on the meadow reach of Squaw Creek.

Indicator	Target ¹	Evaluation Schedule		Project Implementers	Source Reported	Compliance Comments
Biologic Health (Herbst 2002 protocol)	Biologic condition score (BCS) of 25 or more when flows are continuous	Sampling conducted once every two years between the months of July and September	Assessed using 3-(sampling) event rolling average datasets	Squaw Valley Ski Corp, Squaw Valley Neighborhood Company, Squaw Creek Associates (regulated through individual WDRs), and Placer County (regulated through MS4).	Placer County/ Town of Truckee, Truckee River Water Quality Monitoring Report	BCS has shown some improvements from 2012 to 2014, but has not met the TMDL BCS target of 25 for continuous flows. (refer to Figure 1)
Physical Habitat (Herbst 2002 protocol)	Increasing trend in D-50 (median particle size) value approaching 40 mm or greater		Trend Assessment after 3 consecutive sampling events are completed	Squaw Valley Ski Corp, Squaw Valley Neighborhood Company, Squaw Creek Associates (regulated through individual WDRs), and Placer County (regulated through MS4).	Placer County/ Town of Truckee, Truckee River Water Quality Monitoring Report	Median particle size has increased between 2012 and 2014, but has not met the TMDL target of 40mm or greater. (refer to Figure 2)
	Decreasing trend in percent fines and sand approaching 25% cover of the stream bottom or less		Squaw Valley Ski Corp, Squaw Valley Neighborhood Company, Squaw Creek Associates (regulated through individual WDRs), and Placer County (regulated through MS4).	Placer County/ Town of Truckee, Truckee River Water Quality Monitoring Report	Shows a decreasing trend in percent of fines and sand covering the bottom of the stream bed. (refer to Figure 3)	

Monitoring Parameter	Monitoring Party	Monitoring Schedule	Compliance Comments/BMP projects	
Compliance with all erosion and sedimentation control permit requirements, including BMP installation and maintenance focusing on source control, general requirements and prohibitions, monitoring, and reporting	Water Board staff	Assess permit compliance related to erosion and sedimentation control quarterly using Water Board's permit tracking database currently in place.	Squaw Valley Ski Area	Facility is in compliance.
			Village at Squaw	Not in compliance. Turbidity standards exceed the 10% limit of natural levels (12/31/2014).
			Resort at Squaw	Facility is in compliance. The area exceeds the minimum 70% re-vegetation standard. BMP projects are in full working order. Eroding areas have been mitigated or restored. Mitigated wetland areas have also continued to flourish. The site qualifies for termination of coverage under the general SW permit. Project completed in 2014.
			Placer County	Truckee River Water Quality Monitoring Plan (TRWQMP) to continue monitoring Squaw Creek watershed. Phase 2 implementation occurred from 2013-2014. BMP and restoration projects should improve overall water quality.
Facilities inspections to ensure permit compliance	Water Board staff	Water Board staff to inspect all facilities twice annually	Squaw Valley Ski Area	Facilities have been inspected twice annually.
			Village at Squaw	Facilities have only been inspected once annually.
			Resort at Squaw Creek	Facilities have been inspected, just not twice annually.
			Placer County	Water Board staff participates as part of an advisory committee to deal with small municipal separate storm sewer systems (MS4), helps evaluate new storm water projects and reviews/ updates TMDL requirements based on stream health.
TMDL data review and assessment	Water Board staff	As needed in accordance with numeric targets	All information that is reported by permit holders is reviewed and evaluated by Water Board personnel. TMDL implementation requirements and tracking were satisfied by biannual reviews.	

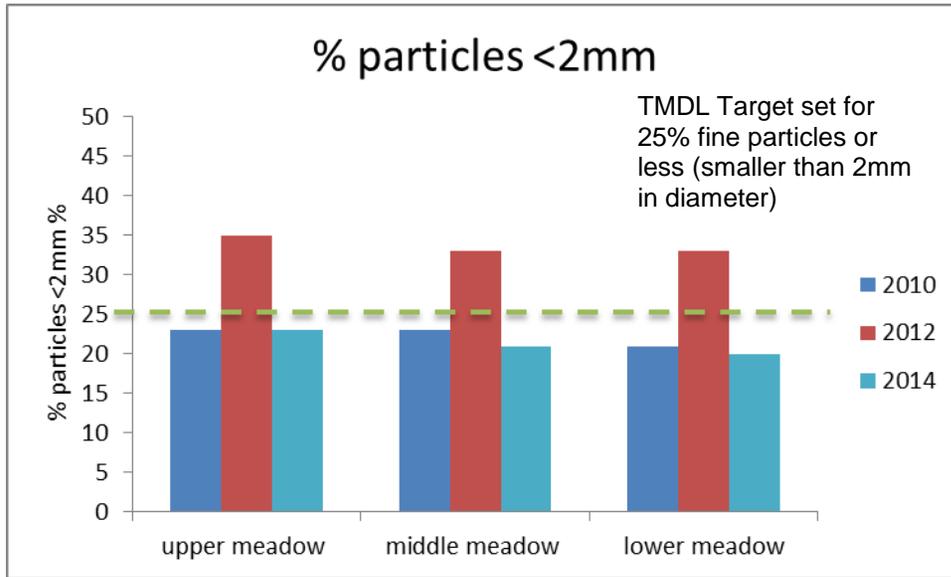


Figure 3